

REMARKS

In the Office Action dated March 31, 2003, the drawings were objected to because the Examiner stated reference numerals 14 and 8 have both been used to designate an additional detector. The Examiner did not make a specific statement as to the necessary change in view of this fact, however, Applicant assumes the Examiner believes the same reference numeral should be used to designate each of these additional detectors. If so, this objection is respectfully traversed, because there is no requirement that the additional detector 8 be identical to the additional detector 14. Different types of detectors can be used as these respective additional detectors. If the same reference numeral were employed to designate both of these detectors, this would imply the detectors in the respective figures must be identical, and this is not the case.

The Examiner suggested a new title, which has been adopted.

Claims 1 and 11 were objected to because the Examiner stated "detector plane" should be changed to "holder plane" in each of those claims. This change has not been made because it is correct that the holder is disposed in a holder plane and the detector is disposed in a detector plane, and these two planes need not necessarily coincide, and in fact in most orientations they will not coincide. It is correct, however, that the word "said" should not be used to precede "detector plane" in claims 1 and 11, and therefore claims 1 and 11 have been editorially amended to refer to "a detector plane."

Claims 1-3 and 6-10 were rejected under 35 U.S.C. §102(e) as being unpatentable over Watanabe. Claims 11-14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Watanabe in view of Malamud.

Claims 4 and 5 were stated to contain allowable subject matter.

By the present Amendment, the subject matter of claim 4 has been embodied in original independent claim 1. In view of the Examiner's statement that claim 4 contained allowable subject matter, claim 1 and the claims depending therefrom are now submitted to be in condition for allowance.

A new independent claim (claim 15) is submitted herein, which is a combination of original claims 1, 7 and 8. Claims 16, 17 and 18 depend from this new independent claim.

Each of new independent claim 15 and original independent claim 11 include the requirement that a non-distorted combined image is produced that is larger than the format of the radiation detector. The Examiner relied on the Malamud reference as providing such a teaching, however, Applicant does not agree that the Malamud reference discloses obtaining a combined image having a larger format than the employed detector. The Examiner cited the Malamud reference as teaching combining images from different perspectives 55 to form a large-format composite X-ray image 62 without distortion. Applicant is unable to find such a description in the text of the Malamud reference. The most that the Malamud reference teaches regarding the composite X-ray image 62 is that the resolution of the calculated image can be enhanced by a slight offset motion of the X-ray source. The schematic illustration shown in Figure 3 of the Malamud reference does not represent a larger-sized image.

Moreover, Applicant does not agree with certain of the Examiner's statements regarding the Watanabe reference. In the Watanabe reference, motions are used to produce different projections for generating 3D images, and the Examiner has

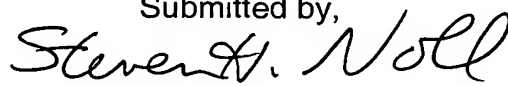
apparently interpreted this as meaning that a composite image is compiled. In fact, the Watanabe reference employs exposures obtained from different directions of the same exposure region for this purpose, as are needed for the calculation of a 3D image, but these exposures are not combined into a larger format 3D image.

In the subject matter of the present application, by contrast, a number of exposures are combined to form a larger image format. Although these multiple exposures may respectively be obtained from different directions, they are not of the same exposure region.

The motions described in new independent claim 15 allow such a compilation without distortion. This is also indicated by Figure 7 of the present application, wherein it can be seen that the X-ray tube is tilted relative to the subject and the detector is displaced, or the entire C-arm is tilted around the isocenter and the entire C-arm is laterally displaced (horizontally, in Figure 7), so that the X-ray tube always remains in the same attitude with respect to the patient and the detector can be considered as "shifting" under the patient.

All claims of the application are therefore submitted to be in condition for allowance, and early reconsideration of the application is respectfully requested.

Submitted by,



(Reg. 28,982)

SCHIFF, HARDIN & WAITE

CUSTOMER NO. 26574

Patent Department

6600 Sears Tower

233 South Wacker Drive

Chicago, Illinois 60606

Telephone: 312/258-5790

Attorneys for Applicants.